

CLAIMS

I Claim,

1. An improved structure of a light wave-guide device
5 essentially comprised of a backlight module including
a reflector mask, multiple light sources, multiple
optical films and a protector sheet arranged in sequence
from inside out; wherein, each light source being made
10 of stripe or U-shape or any other continuously curved
light tube, and disposed at a proper spacing at where
between the reflector mask and a lower diffuser sheet
is characterized by that:
the backlight module being provided with at least one
optical wave-guide device; multiple recesses being
15 provided to the optical wave-guide device to
accommodate respective light source; light from each
light source passing through the optical wave-guide
device being properly refracted and reflected to evenly
diffuse through the lower diffuser sheet to eliminate
20 the dark band formed between abutted light sources;
spacing between light source and the diffuser plate
being reduced; and the thickness of the backlight module
being also reduced in meeting compact requirements.
2. An improved structure of a light wave-guide device as
25 claimed in Claim 1, wherein, the optical wave-guide
device is related to a structure in plate shape.
3. An improved structure of a light wave-guide device as
claimed in Claim 1, wherein, at least one surface of
the optical wave-guide device is embossed.
- 30 4. An improved structure of a light wave-guide device as

- 5 claimed in Claim 1, wherein, the surface of the optical wave-guide device facing the lower diffuser sheet or the surface of the recess of the optical wave-guide device or the surface of the optical wave-guide device facing away from the lower diffuser is locally or entirely embossed.
- 10 5. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the embossment is made at least one straight line or curve or the combination of both in a form of V-, U-, or C-shaped cut.
- 15 6. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, at least one surface of the optical wave-guide device is locally or entirely treated with ink, matted, or printed, or distributed with concave and convex points in either round, rectangular, diamond or polygonal form.
- 20 7. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a transparent sheet.
- 25 8. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a white sheet.
9. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a mat sheet.
- 30 10. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is made of Polycarbonate (PC), or Polymethyl methacrylate (PMMA), or Polyethylene Terephthalate (PET) in to a transparent stick structure.

11. An improved structure of a light wave-guide device as
claimed in Claim 1, wherein, the optical wave-guide
device is made of Polycarbonate (PC), or Polymethyl
methacrylate (PMMA), or Polyethylene Terephthalate
5 (PET) in to a white stick structure.
12. An improved structure of a light wave-guide device as
claimed in Claim 1, wherein, the optical wave-guide
device is made of transparent plastic materials
including Polycarbonate (PC), or Polymethyl
10 methacrylate (PMMA) added with diffusion agent into
a matted stick structure.

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